

Nova's Guide to Fantastic Forces

Explore the invisible pushes and pulls that shape our world with Nova the Owl!

- **Friction** is a force that acts between two surfaces when they rub together, often acting as a 'brake' to slow moving objects down.
- **Air resistance** is a type of friction caused by air pushing against an object as it moves through it, especially if the object is moving quickly.
- **Water resistance** acts on objects moving through water, which is why streamlined shapes like dolphins are designed to move through it easily.
- **Gravity** is the force that pulls all objects towards the centre of the Earth, keeping our feet firmly on the ground.
- **Upthrust** is the upward force that water exerts on an object, which helps things to float if the upthrust is strong enough.

Did you know? Did you know? If you drop a flat sheet of paper and a crumpled ball of paper at the same time, the crumpled ball hits the ground first! This is because the flat sheet has a larger surface area, allowing air resistance to push up against it more effectively and slow its fall.

Key vocabulary: Gravity · Friction · Air resistance · Water resistance · Surface area · Upthrust